REMARKS

Favorable reconsideration of this application as presently amended and in light of the following discussion is respectfully requested.

Claims 1-4 are pending in the present application. Claims 1-4 are amended, and Claims 5-11 are added by the present amendment.[1]

In the outstanding Office Action, the specification was objected to; and Claims 1-4 were rejected under 35 U.S.C. § 103(a) as unpatentable over Applicants' background art and Japanese Patent Application No. JP5-258843 to Shigehiro et al. (hereinafter "Shigehiro").

Regarding the objection to the specification, the abstract is amended in view of the Examiner's comments.

Claims 1-4 stand rejected under § 103(a) as unpatentable over Applicants' background art and Shigehiro. That rejection is respectfully traversed.

Amended Claim 1 recites a ceramic heater, for a semiconductor producing/examining device, including:

> a ceramic substrate having a disc form; and
>
> a resistance heating element formed on a surface of the ceramic substrate;
>
> wherein
>
> a gutter is formed substantially parallel to a direction of current flowing through the resistance heating element,
>
> the ceramic substrate comprises at least one of nitride ceramics and carbide ceramics, and
>
> a heating face which heats a semiconductor wafer is present at a side opposite to a surface on which the resistance heating element is formed.

[1] Claim 5 is supported at page 17, lines 30-31; Claim 6 is supported at page 8, lines 18-19; Claim 7 is supported at page 19, lines 1-4; Claim 8 is supported at page 22, lines 20-21; Claim 9 is supported at page 7, lines 16-24; Claim 10 is supported at page 19, lines 18-20; and Claim 11 is supported at page 18, lines 14-35.

As recited above, the claimed gutter suppresses variations in the local resistance values of the disc-shaped resistance heating element. Such variations in resistance are caused, for example, by corresponding variations in the thickness of the conductive material formed on the substrate of the ceramic heater (Specification, page 2, lines 25-31). The gutter suppresses fluctuations in the local resistance values by trimming sections of the conductive layer (Specification, page 2, line 32 – page 3, line 2).

In a non-limiting example, Figures 5(a)-(c) illustrate three configurations of the claimed gutter. As shown in those figures, the gutter 120, 230, 140 is formed substantially parallel to the flow of current through the resistance heating element 12 (Specification, page 3, lines 10-13). As shown in Figure 6, if the gutter 22a was instead formed perpendicularly to the flow of current, the resistance value of a local portion A of the resistance heating element 22 would increase (Specification, page 3, lines 14-18). Such an increase in resistance can cause a significant increase in heat, thereby damaging the resistance heating element 22 (Specification, page 3, lines 18-25).

The noted Office Action cites the abstract of Shigehiro as teaching the claimed gutter. More particularly, the Office Action cites the trimmed edge of Shigehiro's heating element 2 as teaching the claimed gutter. A "gutter" is defined as a "channel", "trough", "furrow", or "groove" (see http://dictionary.reference.com/search?q=gutter). As shown in Figure 1 of Shigehiro, the trimmed edge is a beveled edge (*e.g.*, a knife edge), formed by trimming the width of the heating element's face (Shigehiro, para. 15). Thus, the trimmed edge is not a gutter (*i.e.*, "channel", "trough", "furrow", or "groove"). Further, as it name implies, the trimmed edge is formed only along the edge of the resistance element. Consequently, the trimmed edge cannot adjust the resistance value of portions lying interior to the heating element's edge. The gutter, as shown Figures 5(a)-(c), lies interior to the edge. In fact, by its definition (*i.e.*, a "channel"), the gutter must lie, to some degree, interior to an edge.

Accordingly, because Shigehiro's trimmed edge does not teach the claimed gutter of the present invention, it is respectfully requested that the rejection under § 103(a) as unpatentable over Applicants' background art and Shigehiro, be withdrawn.

In addition to the above remarks, Applicants note that Shigehiro does not address an analogous art. According to the MPEP:

> In order to rely on a reference as a basis for rejection of an applicant's invention, the reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the inventor was concerned." *In re Oetiker*, 977 F.2d 1443, 1446, 24 USPQ2d 1443, 1445 (Fed. Cir. 1992). See also *In re Deminski*, 796 F.2d 436, 230 USPQ 313 (Fed. Cir. 1986); *In re Clay*, 966 F.2d 656, 659, 23 USPQ2d 1058, 1060-61 (Fed. Cir. 1992) ("A reference is reasonably pertinent if, even though it may be in a different field from that of the inventor's endeavor, it is one which, ***because of the matter*** with which it deals, logically would have commended itself to an inventor's attention in considering his problem."); and *Wang Laboratories Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993). MPEP § 2121.01(a), Analagous and Nonanalogous Art (Emphasis added).

Shigehiro does not deal with a subject matter that logically commends itself to the field of the present invention. Namely, in addressing an issue of semiconductor production/examination, one would not look to the field of photocopiers. Moreover, the problems of concern here have no analogous counterparts in Shigehiro or the photocopier art.

This point is further emphasized by the case law cited by the MPEP. Regarding *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992), the MPEP states:

> The Board relied upon a reference which disclosed a hook and eye fastener for use in garments, ***reasoning that all hooking problems are analogous***. The court held the reference was not within the field of applicant's endeavor, and was not reasonably pertinent to the particular problem with which the inventor was concerned because ***it had not been shown that a person of ordinary skill, seeking to solve a problem of fastening a hose clamp, would reasonably be expected or motivated to look to fasteners for garments***. (emphasis added) MPEP § 2141.01(a).

Regarding *Stevenson v. International Trade Comm.*, 612 F.2d 546, 550, 204 USPQ 276, 280 (CCPA 1979), the MPEP also states, "In a simple mechanical invention a broad spectrum of prior art must be explored and it is reasonable to permit inquiry into other areas ***where one of ordinary skill in the art would be aware that similar problems exist.***" (emphasis added). The outstanding Office Action does not suggest that a person addressing problems of semiconductor fabrication would reasonably expect to find solutions in the field of photocopiers; nor does it suggest such a person would be aware that a similar problem exists in that field.

In addition to differences in the arts, differences in the inventions themselves must be considered. In fact, differences in the structures and functions of inventions carry far greater weight than their PTO reference classifications. MPEP § 2141.01(a). It should be noted that the present application and Shigehiro are clearly not of the same classification. Morevoer, the respective inventions are of different structure and function. For instance, while Shigehiro employs an oblong alumina ceramic heater element having low thermal conductivity, the claimed invention employs a disc shaped nitride/carbide ceramic heating element having high thermal conductivity. Further, because Shigehiro's heating element is used for fixing toner on a paper sheet and because the heating element faces the object to be heated, it does not require high thermal conductivity. The claimed heating element, on the other hand, is used for heating a semiconductor wafer, and must therefore have a relatively high thermal conductivity to ensure a greater evenness of temperature on the heating face.

Of course, the differences in structure need not be so great. Regarding *Wang Laboratories, Inc. v. Toshiba Corp.*, 993 F.2d 858, 26 USPQ2d 1767 (Fed. Cir. 1993), the MPEP states:

> Reference was found to be in a different field of endeavor because it involved memory circuits in which modules of ***varying sizes*** may be added or replaced, whereas the claimed invention involved compact modular memories.

> Furthermore, since memory modules of the claims at issue were ***intended for personal computers and used dynamic random-access-memories***, whereas reference SIMM [single in-line memory modules] was developed for use in large industrial machine controllers and only taught the use of static random-access-memories or read-only-memories. (emphasis added) MPEP § 2141.01(a).

As noted above, the heating elements of the present invention and Shigehiro are of different shape (disc-shaped versus rectangular) and size; they are intended for use in different devices (semiconductor fabrication devices versus photocopiers); and they have been developed for different purposes (fabricating semiconductors verus fixing photocopier toner). Thus, in view of these differences alone, the present invention and Shigehiro do not address analogous arts.

Accordingly, because the present invention and Shigehiro address do not address analogous arts, Shigehiro cannot be cited in support an obviousness rejection. Thus, it is respectfully requested the rejection under § 103(a) as unpatentable over Applicants' background art and Shigehiro, be withdrawn.

Consequently, in light of the above discussion and in view of the present amendment, the present application is believed to be in condition for allowance, and an early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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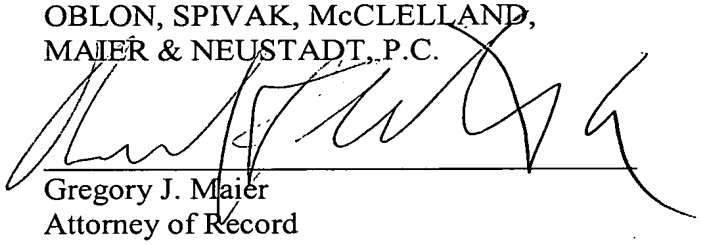

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